Submission of Samples to the lowa State University Veterinary Diagnostic Laboratory for Rabies Examination

Bruce H. Janke, DVM, PhD Veterinary Diagnostic Laboratory Iowa State University Ames, IA

Rabies Testing at the ISU VDL

- Much of the rabies testing conducted at the ISU VDL is done in the context of diagnostic work-ups directed toward determining the cause of illness in the animal submitted for examination
- As with other cases submitted to the VDL, examinations are conducted at the request of a submitting veterinarian and fees are assessed for tests conducted

Rabies Testing at the ISU VDL

- Submissions for rabies examination only can be made under the name of a physician or other responsible public health officer to whom results can be reported
- Owner will be responsible for assessed fees (payable upon submission)

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Rabies Cases

- Human-exposure cases
 - Purpose of testing is to determine risk of infection to human exposed to rabies suspect animal
- Non-human-exposure cases
 - Purpose of testing is to identify or rule out rabies as the cause of illness (usually CNS signs)
 - Additional testing can be conducted if rabies tests are negative

ISU VDL Contact Information

 Information, rabies submission forms, and the location of the laboratory can be found on the ISU VDL Website:

www.vetmed.iastate.edu/departments/vdpam/vdl/userguide/virology/

ISU VDL Contact Information

- VDL Address: Veterinary Diagnostic Laboratory Iowa State University 1600 So. 16th St., Ames, IA 50011
- VDL Telephone: (515) 294-1950
- VDL Submission Fax: (515) 294-6961

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Consultation on Submissions Kyoung-Jin Yoon, DVM, PhD Virology Section Leader Daytime: (515) 294-1950 After hours cell phone: (515) 290-0049 Pathologist on duty Daytime: (515) 294-1950 After hours cell phone: (515) 291-3193 **Testing Schedule** Weekday schedule Same day if received before 11 am • After 12 pm, test will be run next business day · Weekend/after hours schedule • No tests conducted evenings or weekends • Weekend/ after hours coverage provided by Iowa Hygienic Lab Case Submission Samples can be dropped off at the submission desk weekdays 8 am - 5pm After hours and weekends, samples can be dropped off at the Small Animal desk (Emergency staff: 515-294-1500) or by calling VDL student aides: 515-290-1969

 Samples also can be delivered by commercial carrier; double watertight packaging inside sturdy outer container with

submission form and cold packs

Samples to Submit

- Intact entire brain is needed for optimum analysis
- Brain alone is sufficient if care can be taken on removal
- Intact head is preferable if brain removal is difficult (e.g. bats)
- Entire animal is preferable if other testing to determine cause of illness may be desired

Samples to Submit

- Brain
 - ½ fresh (chilled, not frozen)
 - ½ formalin- fixed
- Intact head
- Entire body (dead)
- Animals should be euthanized before submission if at all possible to minimize number of people potentially exposed

Live Rabies Suspects

- Dogs, cats, horses (and wildlife if possible) should be euthanized before submission
- Small wildlife (and dogs/cats if absolutely necessary) if submitted alive must be in a cage or portable kennel; euthanasia fee will be charged
- Livestock can be submitted alive if necessary (handling facilities available)

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Results Reporting

- Positive results will be called out to the submitting veterinarian by the technician responsible for the test as soon as the test is completed
- Negative results also called out same day by clerical staff; letter to follow
- Phone number needed that will be answered by a person (not answering machine/voice mail)

Test Results

- Positive: Rabies virus detected in at least one of the samples examined
- Negative: No rabies virus detected, all necessary sample sites presented, and tissue quality acceptable
- Inconclusive: No rabies virus detected, but not all desired sample sites received, or tissue quality questionable
- No test: No brain tissue received in condition that could be tested

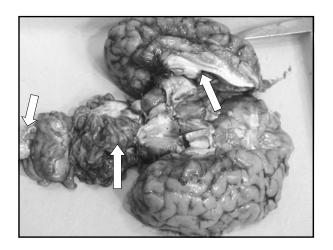
Brain samples

- Brain must be intact; three areas are tested (hippocampus, cerebellum, brain stem)
- Brain stem and cerebellum are critical (most often left in the skull or damaged on removal)
- Decomposition does interfere with test results; a reliable test may not be possible

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Test Procedures

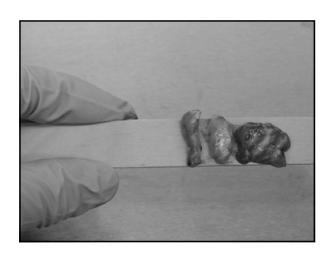
- Fluorescent antibody test on impression smears of brain is the standard test
- Impression smears made of each of the desired sites within the brain
- Impression smears stained with antibody against the rabies virus
- Slides read under a fluorescent microscope



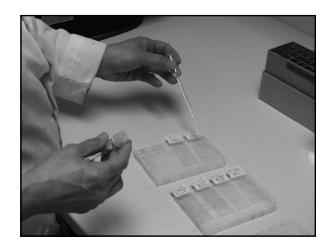




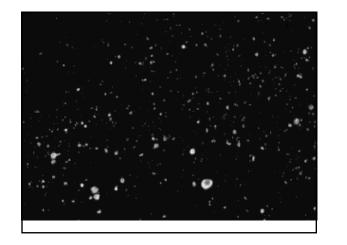












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